

Claims:

1. A method of controlling the recoil temperature of metal strip in a continuous heat treatment line, which comprises continuously passing hot, heat-treated metal strip alternately around spaced apart accumulator rolls, exposing the metal strip to ambient cooling air while travelling between said spaced apart rolls, controlling the temperature of the metal strip emerging from the accumulator rolls by varying the distance between said spaced apart rolls to thereby vary the length of metal strip exposed to said cooling air and rewinding the metal strip at a controlled temperature in coil form.

2. The method of claim 1 wherein the roll spacing is controlled by sensing temperature conditions of the metal strip immediately before rewinding and communicating said sensed temperature conditions to a controller which controls the spacing of the accumulator rolls.

3. The method of claim 2 wherein temperature conditions of the metal strip are sensed upstream of the accumulator rolls and communicated to the controller for further control of the spacing of the accumulator rolls.

4. The method of claim 3 wherein the controller is programmed and stores information on the metal strip thickness, width and travel speed.

5. The method of claim 4 wherein the controller also stores information on the heat transfer coefficient, pressure and temperature of the heat transfer media.

6. The method of claim 3 wherein the metal strip is aluminum strip.

7. The method of claim 6 wherein the accumulator rolls are arranged in spaced apart rows of rolls between which the

aluminum strip alternately passes and the length of aluminum strip passing around the accumulator rolls is controlled by varying the spacing of the rows of rolls.

8. The method of claim 6 wherein the aluminum strip has  
5 a thickness of about 0.1 to 6.0 mm.

9. The method of claim 8 wherein the aluminum strip travels at a speed of about 6-120 m/min.

10. The method of claim 9 wherein the aluminum strip has an initial temperature of up to 160°C and is cooled to a  
10 temperature in the range of ambient to 130°C for rewinding.

11. A system for controlling the recoil temperature of metal strip in a continuous heat treatment line comprising:

(a) an accumulator for receiving hot, heat-treated metal strip, said accumulator having spaced apart accumulator rolls  
15 around which the heat-treated metal strip continuously passes,

(b) adjustable spacer means for holding the spaced apart accumulator rolls at variable controlled distances apart,

(c) a coiler adapted to recoil metal strip exiting the accumulator,

20 (d) sensors for sensing strip temperature, and

(e) a controller connected to the sensors to receive signals therefrom and thereby actuate the adjustable spacer means to control the accumulator roll spacing.

12. The system of claim 11 which includes a temperature  
25 sensor located to sense temperature conditions of the metal strip immediately before the coiler.

13. The system of claim 11 which includes a temperature sensor located to sense temperature conditions of the metal strip upstream of the accumulator rolls.

14. The system of claim 11 wherein the accumulator rolls are arranged as a pair of spaced rows of rolls, with adjustable spacer means for holding said rows of rolls at variable controlled distances apart.

5 15. The system of claim 14 wherein the rows of rolls are mounted on spaced apart roll carriages which are connected to hydraulic or electro-mechanical spacing adjustment mechanisms.

10 16. The system of claim 14 wherein the rows of accumulator rolls are spaced apart by distances between 2 and 18 meters.

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